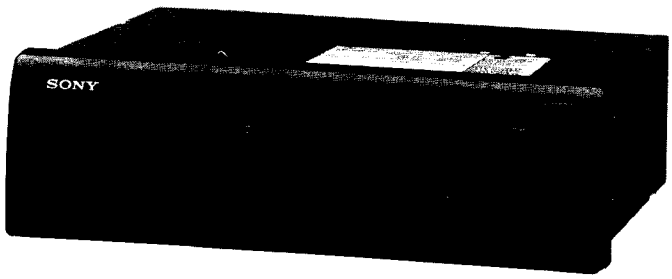
XR-3503

SERVICE MANUAL

East European Model



Model Name Using Similar Mechanism	XR-1853
Tape Transport Mechanism Type	MG-36SZ6-32

SPECIFICATIONS

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.13 % (WRMS)
Frequency response	30 – 16,000 Hz
Signal-to- noise ratio	55 dB

Tuner section

FM

Tuning range	65.0 – 74.0 MHz 87.5 – 108.0 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	12 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	60 dB (stereo), 65 dB (mono)
Harmonic distortion at 1 kHz	0.6% (stereo), 0.4% (mono)
Separation	30 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	4 dB

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW : 153 – 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	450 kHz
Sensitivity	MW: 30 µV LW : 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	15 W × 4 (at 4 ohms)

General

Output lead	Power antenna relay control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 186 × 57 × 170 mm (w/h/d)
Mounting dimension	Approx. 182 × 53 × 154 mm (w/h/d)
Mass	Approx. 1.3 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

MICROFILM

FM/MW/LW CASSETTE CAR STEREO

SONY®

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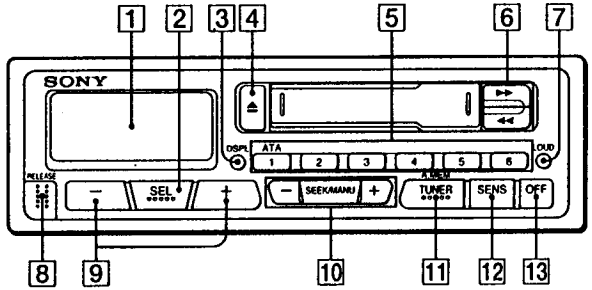
Button Locations



Refer to the pages in ● for details.

1 Display window
2 SEL (control mode select) button ❺❻
3 DSPL (display mode change/time set) button ❺
4 ≜ (eject) button ❺
5 During radio reception:
Preset number buttons ❼
During tape playback:
ATA (Automatic Tuner Activation) button ❻
6 ◀◀/▶▶ (fast winding)/DIR (tape transport direction change) buttons ❺❻
7 LOUD (loudness) button ❻
8 RELEASE (front panel release) button ❹❻
9 (volume/bass/treble/balance/fader control) button ❺❻
10 SEEK/MANU button ❻❼
11 TUNER/A.MEM (radio on • band select/automatic memory) button ❻❼
12 SENS (sensitivity adjust) button ❻
13 OFF button ❹

Setting the Clock

The clock has a 24-hour digital indication.

For example, setting it to 10:08

1 Display the time.
(Press the DSPL button during unit operation.)

2 Press the DSPL button for more than two seconds.

The hour digit blinks.

Set the hour digits.

(to go back) (to go forward)

3 Press the SEL button momentarily.

The minute digit blinks.

Set the minute digits.

(to go back) (to go forward)

4 Press the DSPL button momentarily.

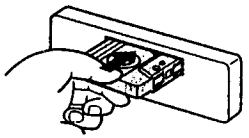
The clock activates.

Note
The clock cannot be set unless the power is turned on. Set the clock after you turned on the radio, or tape playback.

Cassette Player Operation

Listening to Tape Playback

After inserting the cassette, playback will start automatically.



To change the tape direction,
press both the ◀◀ and the ▶▶ button at the same time.

Indication of Tape Transport Direction

The side facing up is being played.

The side facing down is being played.

Tape playback automatically changes direction at the end of the tape.

Note
Before turning off the unit, eject the tape to avoid tape damage.

Ejecting the Cassette

Press the ≜ button to stop playback and eject the cassette.

This section is extracted from instruction manual.

Fast-winding the Tape

Direction indicator*	To advance	To rewind
►		
◄		

To resume playback, press the other fast-winding button until the locked button is released.

* ◄ or ► *indicator will flash while fast-winding the tape.*

Radio Reception during Fast-forwarding or Rewinding of a Tape

— ATA (Automatic Tuner Activation) Function

Press the (ATA 1) button during playback. → "ATA" appears on the display.
When fast-forwarding or rewinding with the ◄◄ or ►► button, the tuner will turn on automatically.

Radio Reception

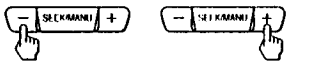
Searching for the Stations Automatically

— Automatic Tuning

1 Select the desired band.

FM1 → FM2 → MW → LW → FM1

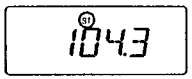
2 Press either side of the SEEK/MANU button momentarily to search for the station (automatic tuning).



For lower frequencies — For higher frequencies

The scanning stops when a station is received. Press either side of the button repeatedly until the desired station is received.

When an FM stereo program with a suffident signal strength is tuned in,



the "ST" indication will appear.

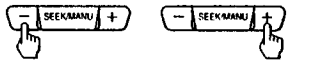
To avoid the automatic tuning from stopping on stations too frequently (local seek mode), press the SENS button momentarily to get the "LCL" indication.
Only the stations with relatively strong signals can be tuned in. The local seek mode functions only when the automatic tuning is in operation.

Tuning in by Adjusting the Frequency — Manual Tuning

1 Select the desired band.

FM1 → FM2 → MW → LW → FM1

2 Press and hold either side of the SEEK/MANU button.
Release the button when the desired station is received.



For lower frequencies — For higher frequencies

PREVENTING ACCIDENTS!
When tuning in during driving, use the automatic tuning and the memory preset tuning instead of the manual tuning.

Memorizing Stations Automatically

— Automatic Memory Function

Stations with clearest reception are automatically searched and memorized on each band (FM1, FM2, MW and LW). Up to 6 stations on each band can be stored on the preset number buttons 1 to 6 in the order of frequency.

1 Select the desired band.

FM1 → FM2 → MW → LW → FM1

2 Press the TUNER/A.MEM button for more than two seconds.

The unit will be start scanning the selected band and memorizes the tuned stations on the preset number button 1 through 6 automatically.

Memorizing Only the Desired Stations

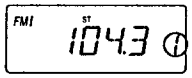
1 Select the desired band.

FM1 → FM2 → MW → LW → FM1

2 Tune in the station which you wish to store on the preset number button.

3 Keep the desired preset number button (ATA 1 to 6) pressed for about two seconds until you hear a beep tone.

The number of the pressed preset number button appears on the display window.



Up to 6 stations on each band (FM1, FM2, MW and LW) can be stored on the preset number buttons in order of your choice. Therefore, 12 stations can be memorized on FM.
If you try to store another station on the same preset number button, the previously stored station will be erased.

Receiving the Memorized Stations

1 Select the desired band.

FM1 → FM2 → MW → LW → FM1

2 Press momentarily the preset number button (ATA 1 to 6) on which the desired station is stored.

Note
If you press the preset number button for more than two seconds, the currently received station will be memorized again. To receive the previously memorized station, make sure that the preset number button is pressed only momentarily.

EN

—4—

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Cassette Player Operation/Radio Reception

Other Functions

Adjusting the Sound Characteristics

1 Select the item you want to adjust by pressing the [SEL] button repeatedly.

VOL (volume) → BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader) → VOL (volume)

2 Adjust the selected item by pressing either the [−] or [+] button.

Adjust within three seconds after selecting. (After three seconds the button will again serve as volume control button.)

Enjoying Bass and Treble even at Low Volume

— Loudness Function

Press the LOUD button. → "LOUD" will appear on the display.
Bass and treble will be reinforced. To cancel, press again.

Maintenance

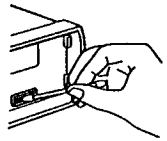
Fuse Replacement

When replacing the fuse, be sure to use one with the correct amperage which is stated on the fuse case. Never use a fuse whose amperage rating exceeds the one supplied to the unit as this could cause a malfunction of the unit.

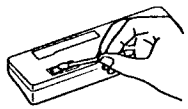
Warning
Use a fuse with the specified amperage.
Use of a fuse with higher amperage may cause serious damage.

Cleaning the Connectors

The unit may not function properly if the connectors between the unit and the front panel are not clean. In order to prevent this, open the front panel by pressing the RELEASE button, then detach it and clean with a cotton swab which was dipped in alcohol. Do not apply too much force. Otherwise, the connector may get damaged.



Main unit



Back of the front panel

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Connections

Caution

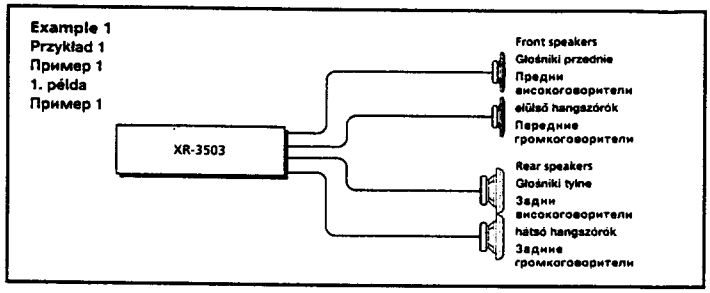
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**

Podłączenia

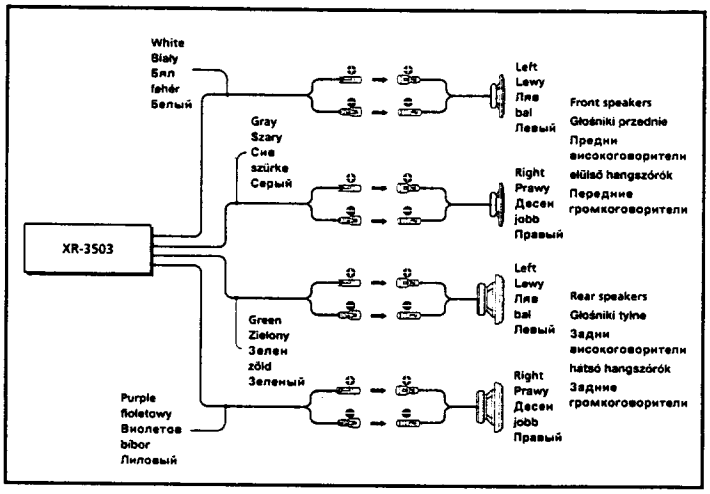
Uwaga

- Urządzenie to przeznaczone jest do pracy przy uziemieniu ujemnym 12V DC.
- Przed podłączeniem należy odłączyć uziemienie akumulatora samochodowego, aby zapobiec powstaniu zwarcia.
- Żółty i czerwony wejściowy przewód zasilający połączyć dopiero po podłączeniu wszystkich innych przewodów.
- Czerwony przewód zasilający podłączyć do końcówki o napięciu +12 V, która zasilana jest zawsze po przekręceniu kluczyka w stacyjce do położenia, w którym włącza się zasilanie przyrządów.
- **Wszystkie przewody uziemiające poprowadzić do wspólnego miejsca uziemienia.**

Connection Diagram/Schemat podłączeń/Схема за свързване/Csatlakoztatási vázlat/Схема подключения



Speaker Connections/Podłączenie głośników/Свързване на високоговорители/Hangszórók csatlakoztatása/Подключения громкоговорителей



Notes on speaker connection

- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Uwagi odnośnie podłączenia głośników

- Stosować głośniki o impedancji 4 do 8 omów i o odpowiedniej obciążalności mocowej, gdyż w innym przypadku może dojść do ich uszkodzenia.
- Nie podłączać przewodów układu głośników do podwozia samochodu, a przyłączy głośnika prawego nie łączyć z przyłączami głośnika lewego.
- Nie podłączać głośników równolegle.
- Nie podłączać do urządzenia głośników aktywnych (z wbudowanymi wzacniaczami), może to bowiem doprowadzić do ich uszkodzenia. Podłączać wyłącznie głośniki pasywne.

Забележки по свързването на високоговорителите

- Използувайте високоговорители с ел. съпротивление (импеданс) от 4 до 8 ома и с подходяща мощност според силата на усилвателя. В противен случай е възможно да повредите високоговорителите.
- Не оставяйте изходните клеми за присъединяване на високоговорители в контакт с открити метални части от шасито на автомобила или пък клеммите за подаване на сигнал към ляв и десен високоговорител в пряк контакт една с друга.
- Не свързвайте успоредно високоговорителите.
- Не свързвайте активни високоговорители (с вграден в тях усилвател) към клеммите за изходен сигнал на апарата. В противен случай е възможно да повредите активните високоговорители. Ето защо е необходимо да се уверите, че свързвате пасивни високоговорители.

Tudnivalók a hangszórók csatlakoztatásáról

- 4-8 ohm impedanciájú, megfelelő teljesítményű hangszórókat használjon, ellenkező esetben ugyanis előfordulhat, hogy a hangszórók károsodnak.
- Ne csatlakoztassa a hangszórókat az autó fémszerkezetéhez és ne csatlakoztassa a jobb hangszórót a bal hangszóróhoz.
- A hangszórókat semmi esetre se csatlakoztassa párhuzamosan.
- Ne csatlakoztasson aktív (beépített erősítővel felszerelt) hangszórókat a készülékhez, ellenkező esetben ugyanis károsodhatnak az aktív hangszórók. A készülékhez csak passzív hangszórókat szabad csatlakoztatni.

Примечания к инструкции по подключению громкоговорителей

- Перед подключением громкоговорителей аппарат необходимо выключить.
- Используйте громкоговорители с электрическим сопротивлением 4-8 Ом, способные принимать достаточно мощные сигналы. В противном случае громкоговорители могут быть повреждены.
- Не подключайте контакты системы громкоговорителей к шасси автомашины и не подключайте контакты правого громкоговорителя к контактам левого громкоговорителя.
- Не подключайте громкоговорители параллельно.
- Не подключайте активных громкоговорителей (т.е. со встроенными усилителями) к контактам аппарата для громкоговорителей: это может привести к повреждению активных громкоговорителей. Поэтому убедитесь, что Вы подключаете к этим контактам пассивные громкоговорители.

Свързване

Внимание

- Този апарат е проектиран за експлоатация само с постоянен ток с напрежение 12 В и заземяване на апарата на отрицателната клема на акумулаторната батерия.
- Преди да започнете свързването на апарата, откачете отрицателната клема на акумулаторната батерия, за да избегнете възникването на късо съединение.
- Извършете свързването на жълтия и червения захранващи ел. проводници само след като сте свързали вече всички останали проводници.
- Свържете червения захранващ ел. проводник към положителната клема под напрежение 12 В, която се захранва с ток, когато ключът за запалване е завъртян в положение за включване на допълнителни уреди.
- Всички заземяващи проводници свържете към една обща точка.

Csatlakozások

Figyelem

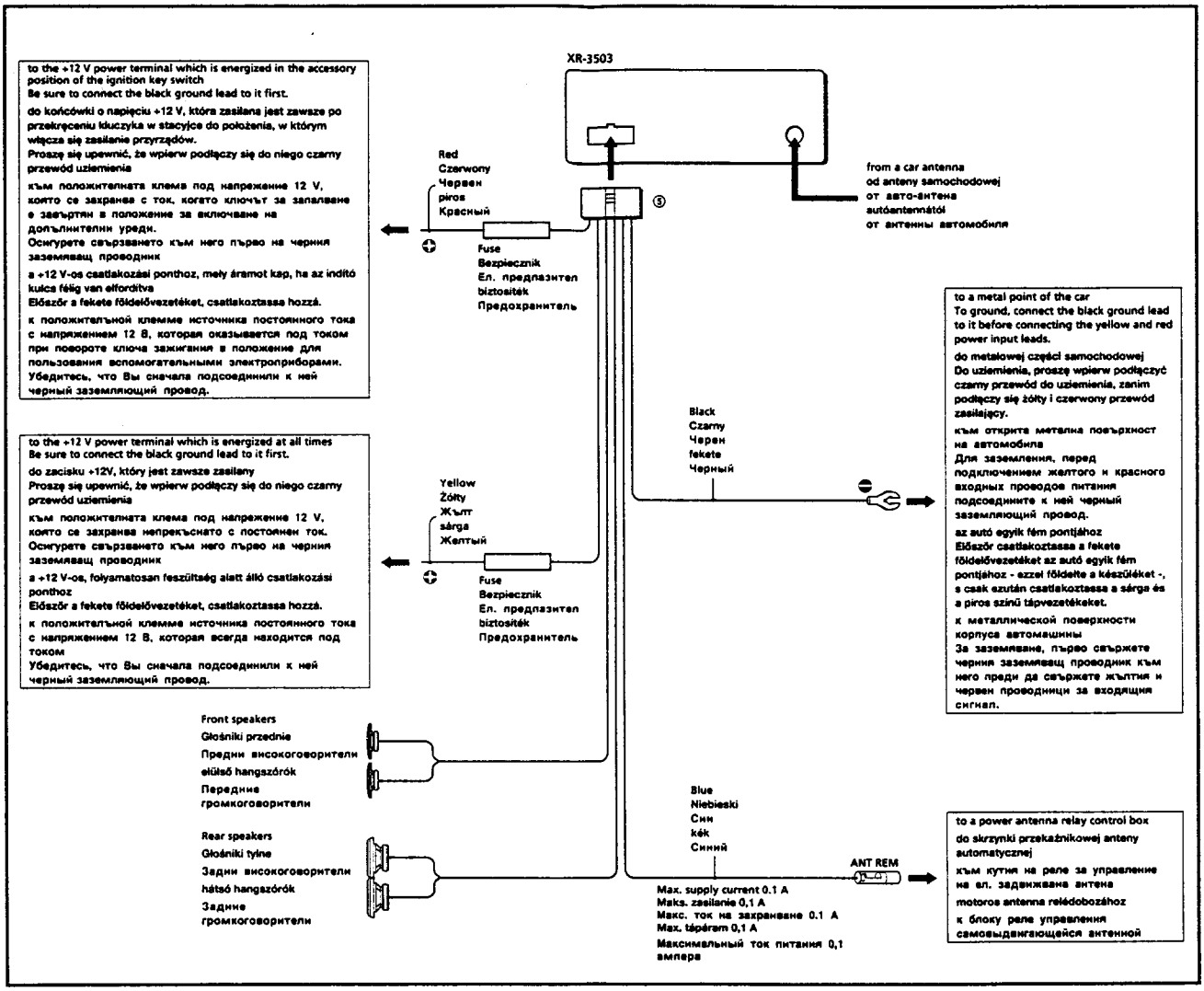
- Ez a készülék csak 12 V-os negatív földelésű, egyenáramú akkumulátorról üzemeltethető.
- Egy esetleges rövidzárlat elkerülése érdekében vegye le az autó akkumulátorának csatlakozóját a készülék csatlakoztatása előtt.
- A **sárga** és a **piros** színű tápvezetéket csak az összes többi vezeték bekötése után csatlakoztassa.
- A piros vezetéket ahhoz a +12 V-os csatlakozási ponthoz csatlakoztassa, mely áramot kap, ha az indítókulcs félig van elfordítva (ACC-pozíció).
- **Az összes földelővezetéket közös földelőponthoz csatlakoztassa.**

Подключения

Предостережение

- Аппарат предназначен для эксплуатации только при подключении к электросети постоянного тока с напряжением 12 В и отрицательной массой.
- До начала установки во избежание короткого замыкания отсоедините клемму массы от аккумуляторной батареи автомашины.
- Подключайте электропровода питания красного и желтого цвета только после подключения всех прочих проводов.
- Убедитесь в том, что красный электропровод подключен к положительной клемме источника тока с напряжением 12 В, которая оказывается под током при повороте ключа зажигания в положение для пользования вспомогательными электроприборами.
- Подключите все провода, выводимые на массу, к одному общему контакту.

Connections of Example 2/Przykład podłączenia 2/Примерно свързване 2/Csatlakoztatási példák 2/Пример подключения 2



Notes on the control leads
- *The power antenna control lead (blue) supplies +12 V DC when you turn on the unit.*
- *A power antenna without relay box cannot be used with this unit.*

Uwagi odnośnie przewodów kontrolnych
- Przewód kontrolny anteny automatycznej (niebieski) dostarcza +12V DC po włączeniu sprzęt.
- Do niniejszego urządzenia nie można używać anteny automatycznej bez skrzynki przekaźnikowej.

Забележки по проводниците за управление
- По кабела (син) за управление на електрически задвижваната антена се подава прав ток с напрежение 12 V, когато включите уреда.
- Ел. задвижвана антена без собствена кутия с реле, не може да бъде използувана с този апарат.

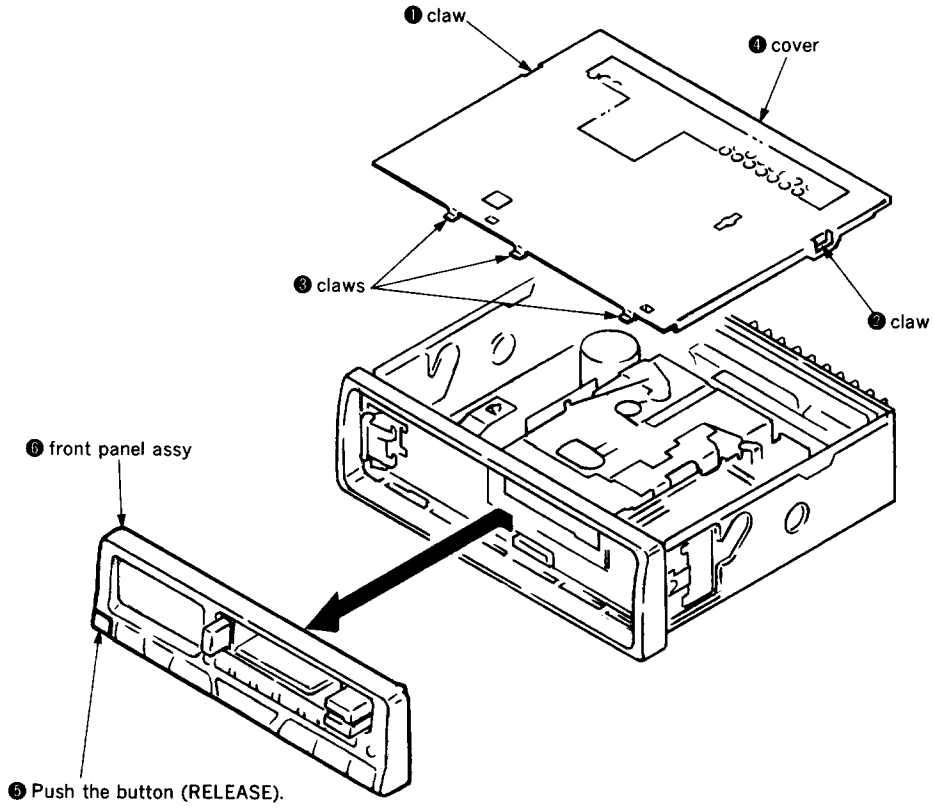
Tudnivalók a vezérlővezetékekről.
- A motoros antenna vezérlővezetéke (kék) 12 V egyenfeszültséget kap, ha bekapcsolja a készüléket.
- Ha a készülékhez motoros antennát csatlakoztat, úgy kizárólag relédobozzal felszerelt motoros antennát használjon.

Примечания к инструкции по подключению проводов для управления электроприборами
- Провод (голубой) для управления самовыдвигающейся антенной подводит постоянный ток напряжением 12 В при включении прибора.
- С данным аппаратом нельзя использовать самовыдвигающиеся антенны без реле управления в отдельном корпусе.

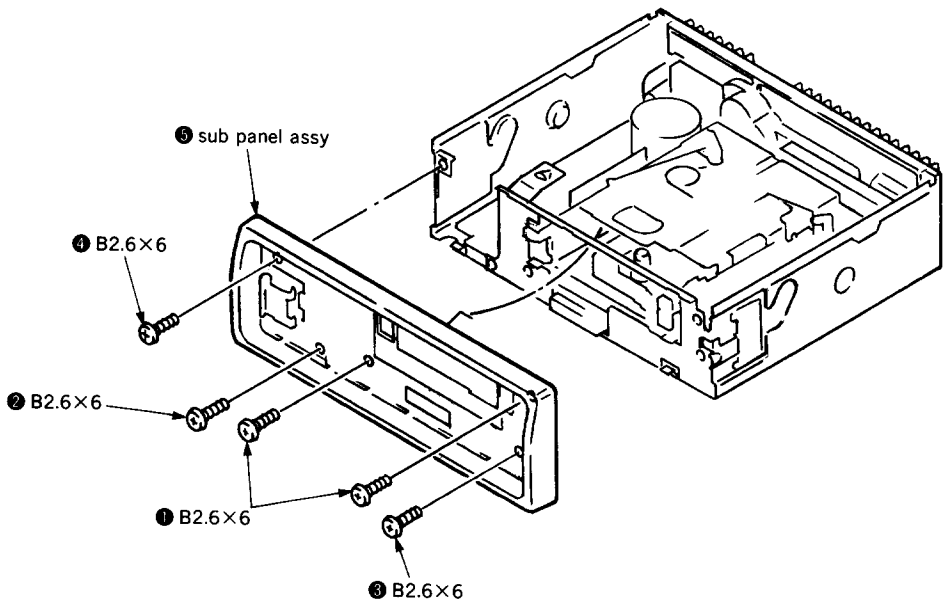
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

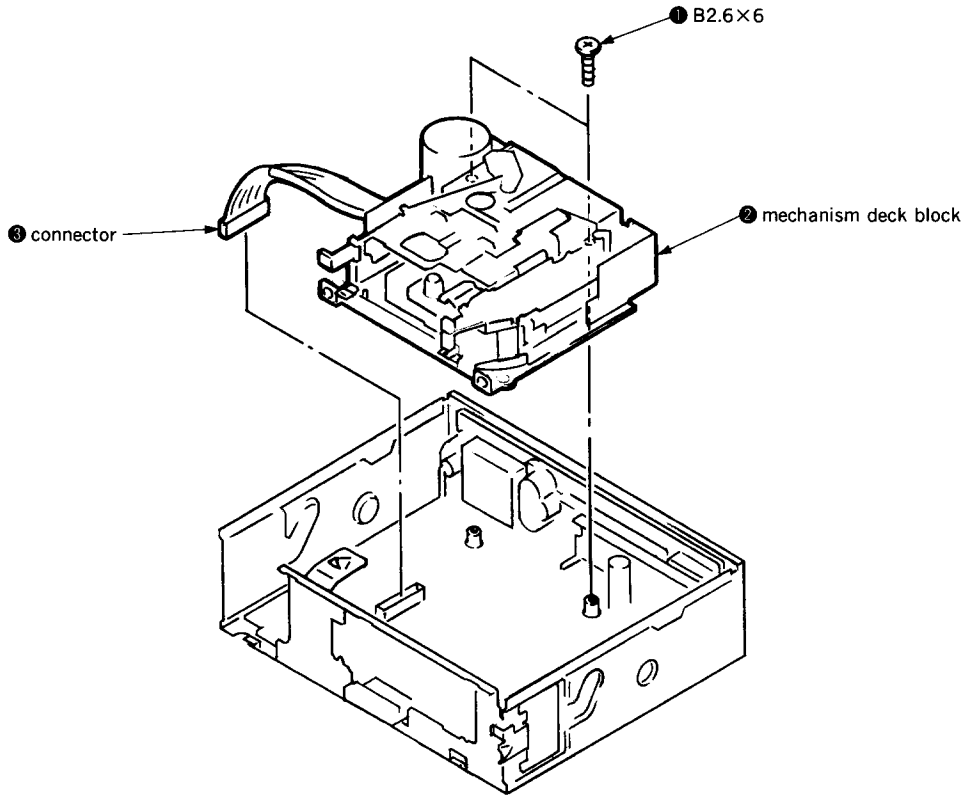
2-1. COVER



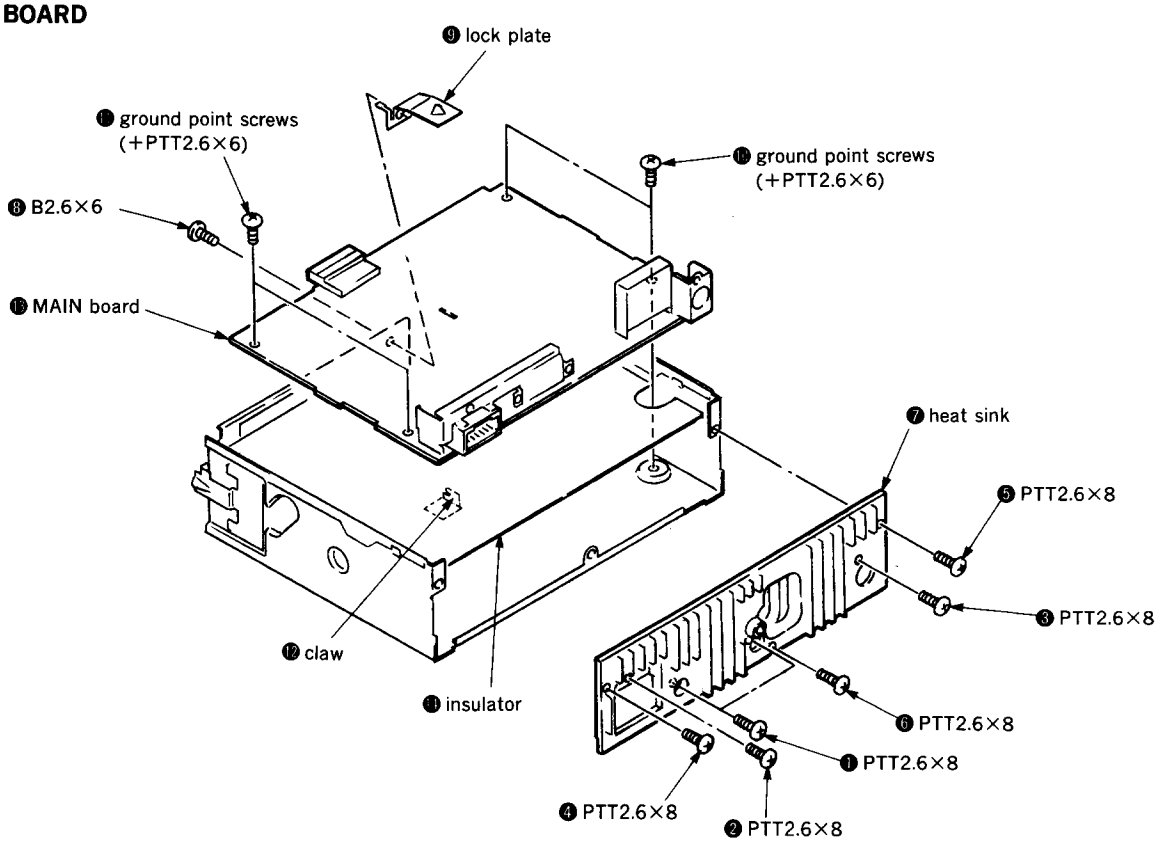
2-2. SUB PANEL ASSY



2-3. MECHANISM DECK BLOCK



2-4. MAIN BOARD



SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before aejustment:
   PB head　　Pinch roller
   Idler　　Rubber belt
   Capstan
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4V).

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	40—75g•cm (0.56—1.04oz•inch)
FWD Back Tension		1—5g•cm (0.01—0.06oz•inch)
REV	CQ-102RC	40—75g•cm (0.56—1.04oz•inch)
REV Back Tension		1—5g•cm (0.01—0.06oz•inch)
FF, REW	CQ-201B	45—150g•cm (0.63—2.08oz•inch)

SECTION 4
ELECTRICAL ADJUSTMENTS

DECK SECTION **0dB=0.775V**

1. The adjustments should be performed in the order given in this service manual.
2. The adjustments should be performed for both L-CH and R-CH.

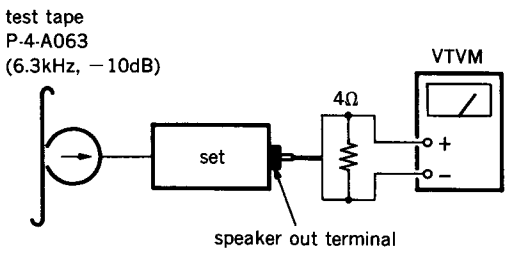
Test Tape

Type	Signal	Used for
P-4-A063	6.3kHz, −10dB	head azimuth adjustment
WS-48A	3kHz, 0dB	tape speed adjustment

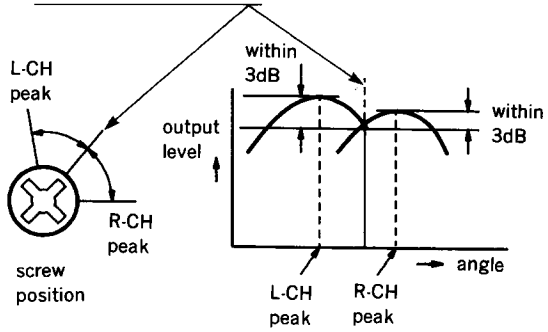
PB Head Azimuth Adjustment

Procedure:

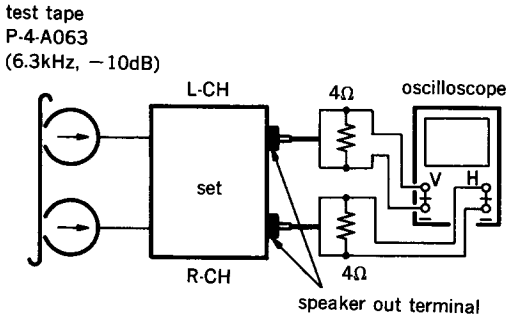
1. Mode: playback

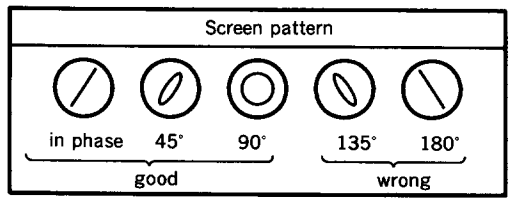


2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 3dB.



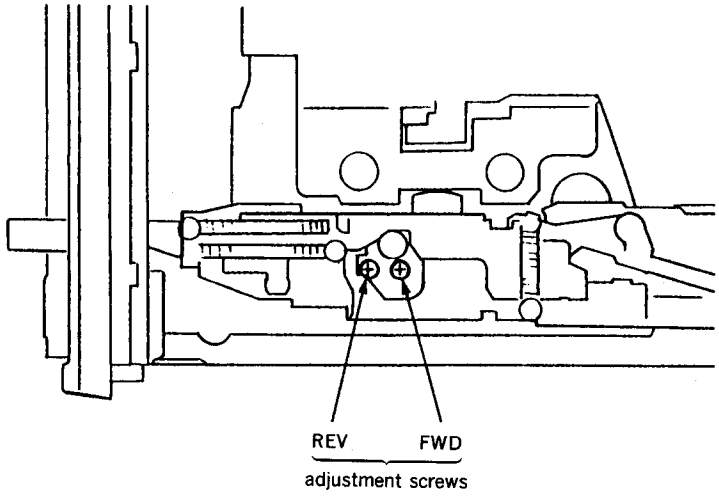
3. Check the phase in the PB mode.





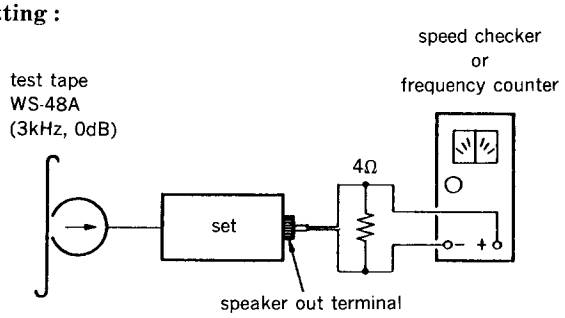
4. Repeat the above adjustment for the PB REV mode.

Adjustment Location:



Tape Speed Adjustment

Setting :



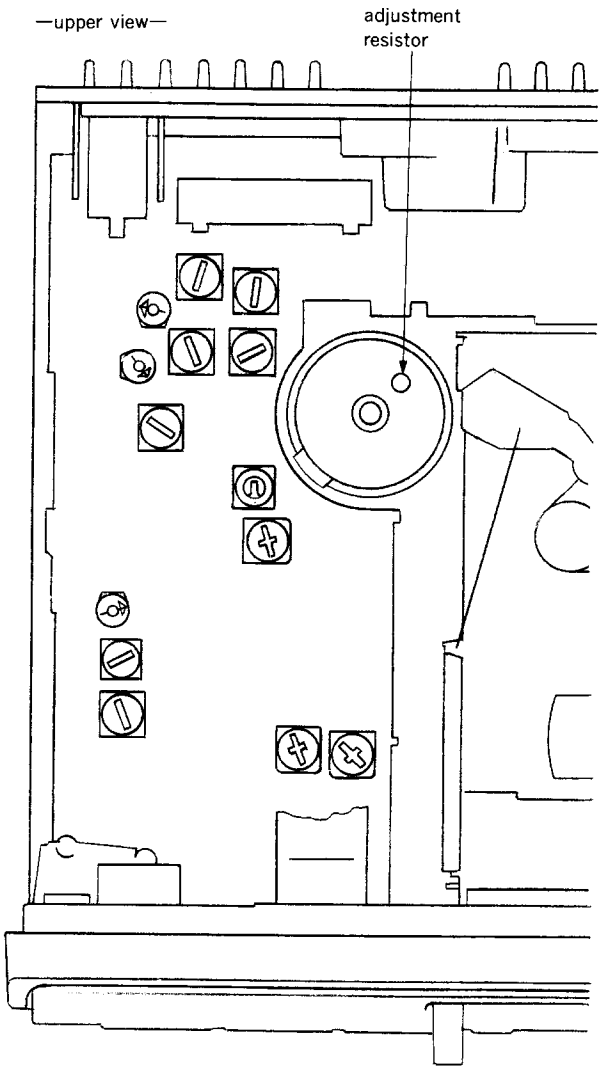
Procedure :

1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the speed checker or frequency counter becomes in specification.

Specification : Constant speed

Speed checker	Frequency counter
−2.0 to +3.0%	2,940 to 3,090Hz

Adjustment Location :



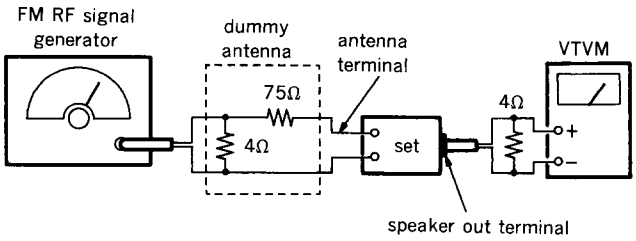
TUNER SECTION | 0dB=1μV

Cautions during repair
When the front end is defective, replace it by a new one because its internal block is difficult to repair.

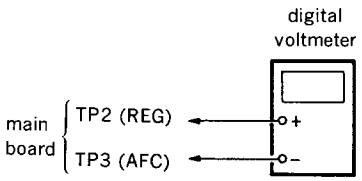
FM OV Adjustment

Setting :

TUNER button : FM



Carrier frequency : 98.0MHz
Output level : 66dB (2mV)
Mode : mono
Modulation : 1kHz, 75kHz deviation (100%)



Procedure :

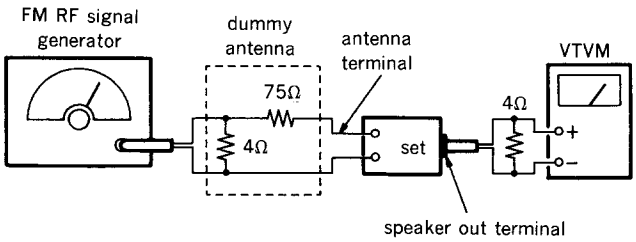
1. Tune the set to 98.0MHz.
2. Adjust T255 so that the reading on the digital voltmeter becomes 0±0.05V.

Adjustment Location : See page 14.

FM High Cut Control Adjustment

Setting :

TUNER button : FM



Carrier frequency : 98.0MHz
Output level : 26dB (20.0μV)
Mode : mono
Modulation : 10kHz, 75kHz deviation (100%)

Procedure :

1. Tune the set to 98.0MHz.
2. The then output level is supposing that (A) dB.
3. Adjust RV253 so that the output level is (A)−5±1dB then signal generator input set to 20dB.

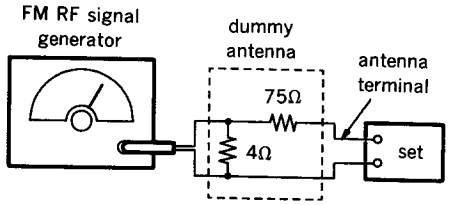
Adjustment Location : See page 14.

FM SEEK Stop Adjustment

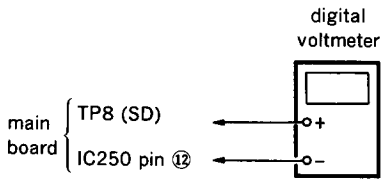
Note : Be sure to perform this adjustment before "MW SEEK Stop Adjustment".

Setting :

TUNER button : FM



Carrier frequency : 98.0MHz
Output level : 22dB (12.6μV)
Mode : mono
Modulation : no modulation



Procedure :

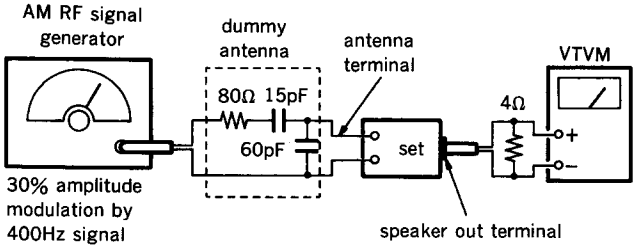
1. Short the jumper wire (between IC250 pin⑫ and GND). (See page 14.)
2. Adjust RV251 so that the reading on the digital voltmeter becomes 3Vdc.
3. After adjustment is completed remove the jumper wire.

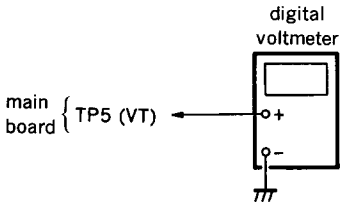
Adjustment Location : See page 14.

MW VT Adjustment

Setting :

TUNER button : MW





Procedure :

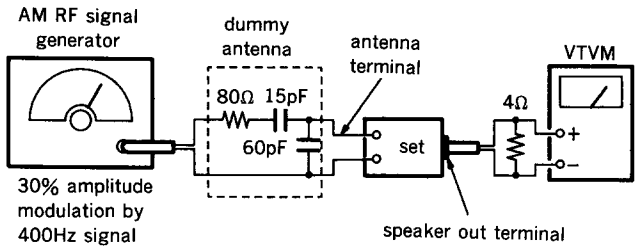
1. Tune the set to 531kHz.
2. Adjust L252 so that the reading on the digital voltmeter becomes 1.5±0.05V.
3. Tune the set to 1,602kHz.
4. Adjust CT252 so that the reading on the digital voltmeter becomes 7.2±0.1V.

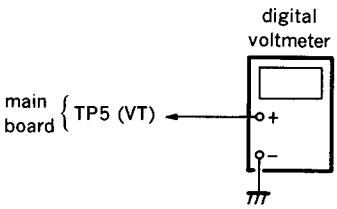
Adjustment Location : See page 14.

LW VT Adjustment

Setting :

TUNER button : LW





Procedure :

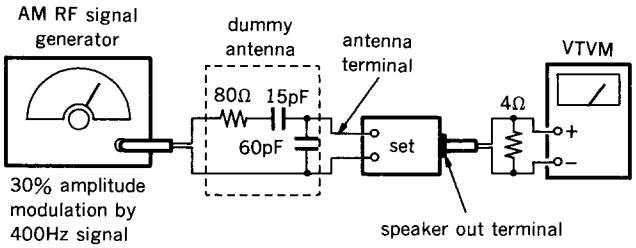
1. Tune the set to 153kHz.
2. Adjust L251 so that the reading on the digital voltmeter becomes 3.0±0.1V.
3. Tune the set to 279kHz.
4. Confirm that the reading on the digital voltmeter becomes 7.0±0.3V.

Adjustment Location : See page 14.

MW IF Adjustment

Setting :

TUNER button : MW



Procedure :

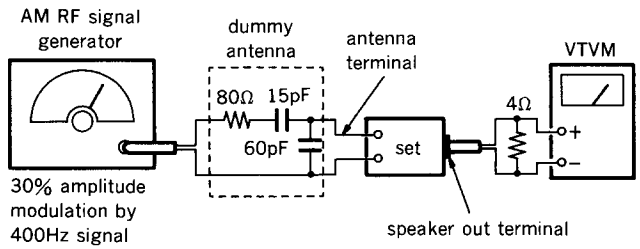
1. Tune the set to 999kHz.
2. Adjust T254 so that the reading on the VTVM becomes to maximum.

Adjustment Location : See page 14.

MW Tracking Adjustment

Setting :

TUNER button : MW



Procedure :

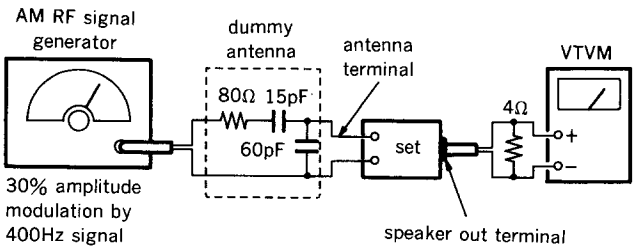
1. Tune the set to 603kHz.
2. Adjust T250 and T252 so that the reading on the VTVM becomes to maximum.
3. Tune the set to 1,404kHz.
4. Adjust CT250 and CT251 so that the reading on the VTVM becomes to maximum.

Adjustment Location : See page 14.

LW Tracking Adjustment

Setting :

TUNER button : LW



Procedure :

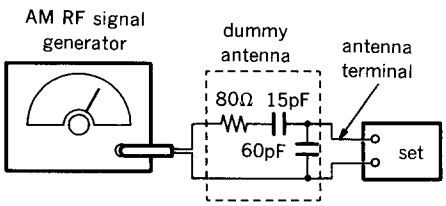
1. Tune the set to 153kHz.
2. Adjust T251 and T253 so that the reading on the VTVM becomes to maximum.

Adjustment Location : See page 14.

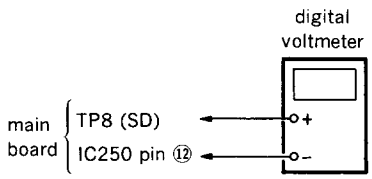
MW SEEK Stop Adjustment

Setting :

TUNER button : MW



Carrier frequency : 999kHz
Output level : 33dB (44.7μV)
Modulation : no modulation

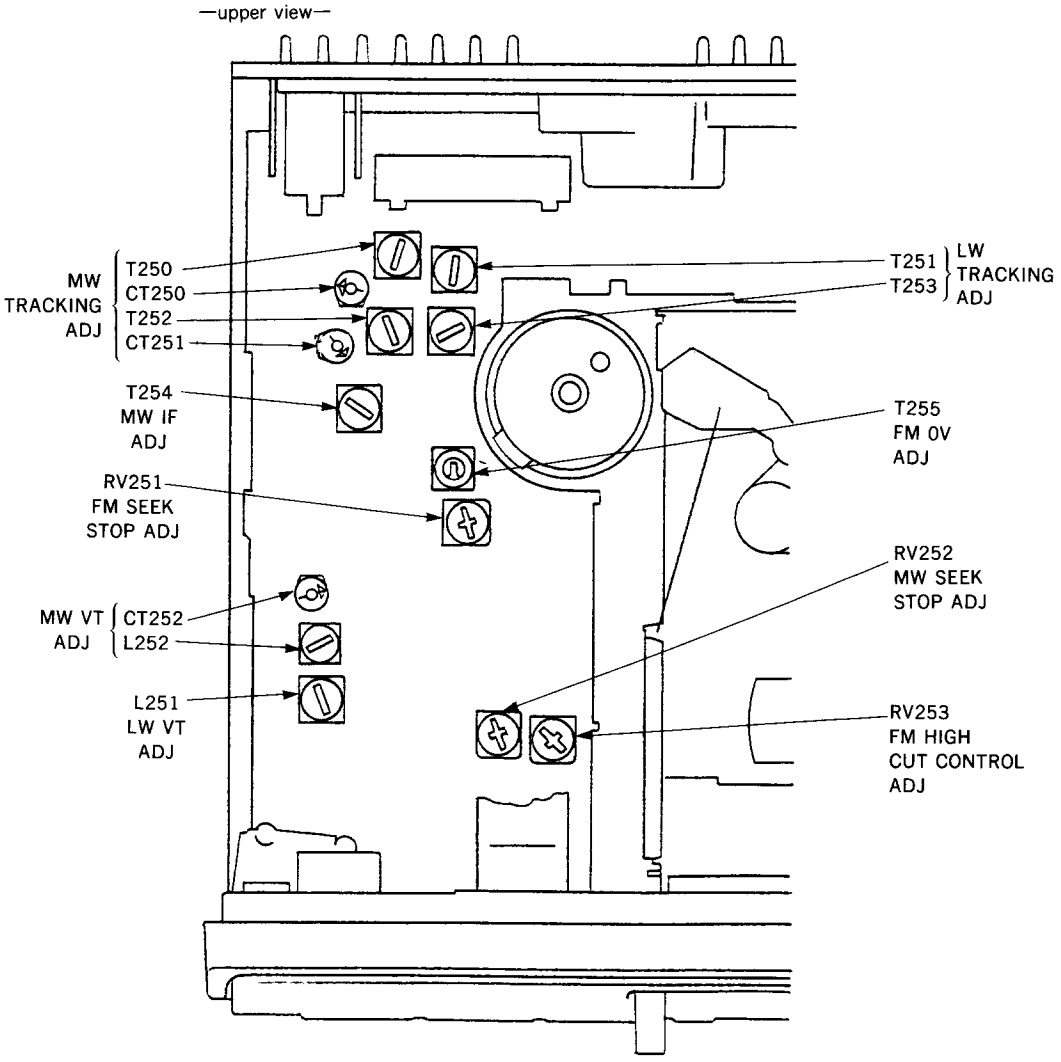


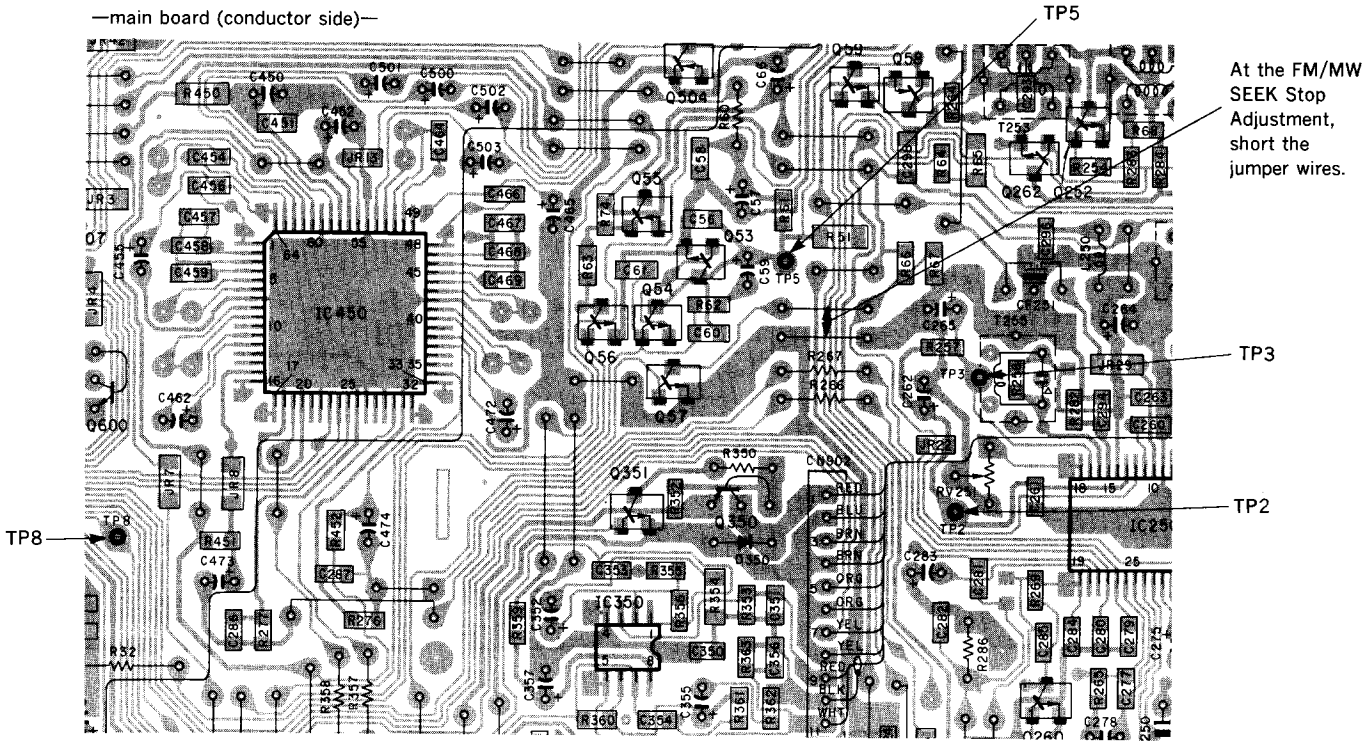
Procedure :

1. Short the jumper wire (between IC250 pin ⑫ and GND). (See page 14.)
2. Adjust RV252 so that the reading on the digital voltmeter becomes 3Vdc.
3. After adjustment is completed remove the jumper wire.

Adjustment Location : See page 14.

Adjustment Location : main board





SECTION 5
DIAGRAMS

5-1. IC PIN DESCRIPTION

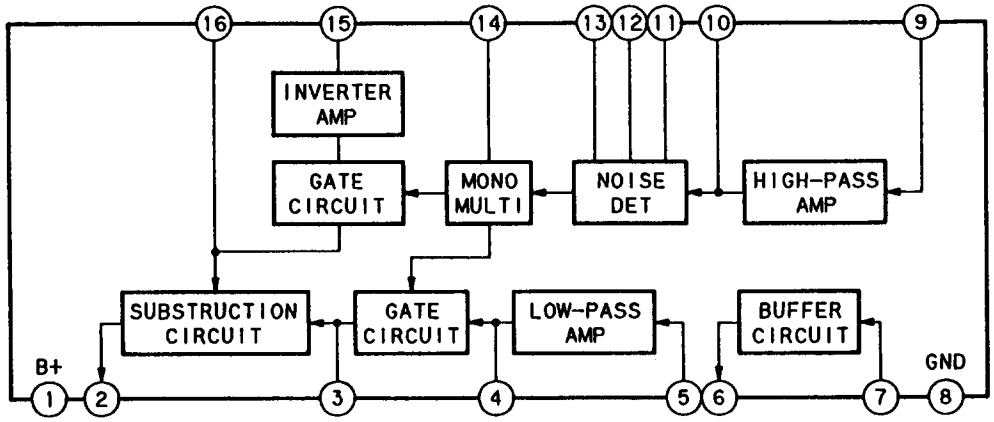
System Control LC7233N-8973 (IC1)

Pin No.	Pin Name	I/O	Pin Description
1	X IN	I	Connect to crystal. (4.5MHz)
2	—	—	Connect to GND.
3	SK	I	At with SK : High input
4	DK	I	At with DK : High input
5	SD	I	At with SD : High input
6	STEREO	I	At STEREO : Low input
7	MOTOR	O	Reel/capstan motor control terminal. At MOTOR-ON : High output
8	—	—	Not used.
9	BEEP	O	For piezoelectric buzzer output terminal
10	POWER ON	O	At POWER-ON : High output
11	ILL ON	O	At ACC-ON : High output, at ACC-OFF : Low output
12	N/R	I	NORMAL/$\overline{\text{REVERSE}}$ output terminal
13	FF/REW	I	At TAPE : High input, at RADIO : Low input
14	TAPE IN	I	At TAPE IN : Low input
15	K1	—	Connect to GND.
16	K0	I	Diode matrix input
17	T2	—	Not used.
18	T1	—	Not used.
19	T0	O	Diode matrix output
20	VOL CE	O	Chip Enable output terminal to ELECTRONIC VOLUME IC (IC450).
21	VOL DI	O	Data output terminal to ELECTRONIC VOLUME IC (IC450).
22	VOL CL	O	Clock output terminal to ELECTRONIC VOLUME IC (IC450).
23	MUTE REQ	I	At ACC-OFF : High input
24	PANEL IN	I	At Detachable IN : Low input, at Detachable OUT : High input
25	BAND KEY	I	At TUNER-ON : Low input
26	—	—	Connect to GND.
27	MUTE	O	Audio mute output terminal
28	—	—	Not used.
29	AMP MUTE	O	Power amplifier mute output terminal
30—34	—	—	Not used.
35—37	KS2—KS0	O	Key matrix output
38	—	—	Not used.
39	LCD DATA	O	Data output terminal to LCD drive IC (IC900).
40	LCD CLK	O	Clock output terminal to LCD drive IC (IC900).
41	LCD CE	O	Chip Enable output terminal to LCD drive IC (IC900).
42	AM	O	At MW : High output
43	MONO	O	At Monaural : High output
44	SEEK	O	At SEEK : Low output
45	MW/LW	O	At MW : High output, at LW : Low output
46	LOCAL/DX	O	At STEREO LOCAL : High output, at STEREO DX or MONO DX : Low output
47	FM ON	O	At FM : High output, at MW or LW : Low output
48	TUNER ON	O	At RADIO : High output, at OFF or TAPE : Low output

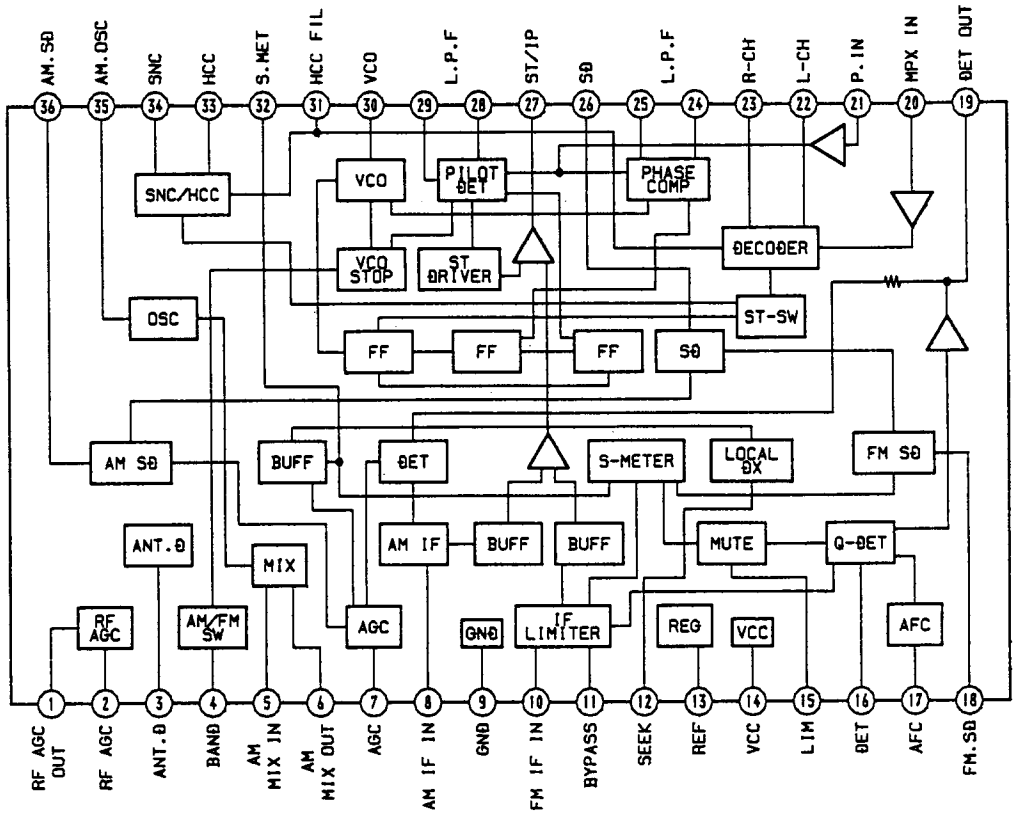
Pin No.	Pin Name	I/O	Pin Description
49—51	—	—	Not used.
52	CE	I	Chip Enable input terminal
53	KEY IN	I	Key matrix signal input terminal
54	IF IN	I	FM/AM IF input terminal
55	BU CHECK	I	Back-up voltage detection terminal
56	VDD	—	Power supply terminal (+5V)
57	FM IN	I	FM local OSC input terminal
58	AM IN	I	AM local OSC input terminal
59	GND	—	GND
60	EO	O	Phase comparator output terminal
61	LPF IN	—	Connect to GND.
62	LPF OUT	—	Not used.
63	—	—	Not used.
64	X OUT	O	Connect to crystal. (4.5MHz)

• **IC Block Diagrams**

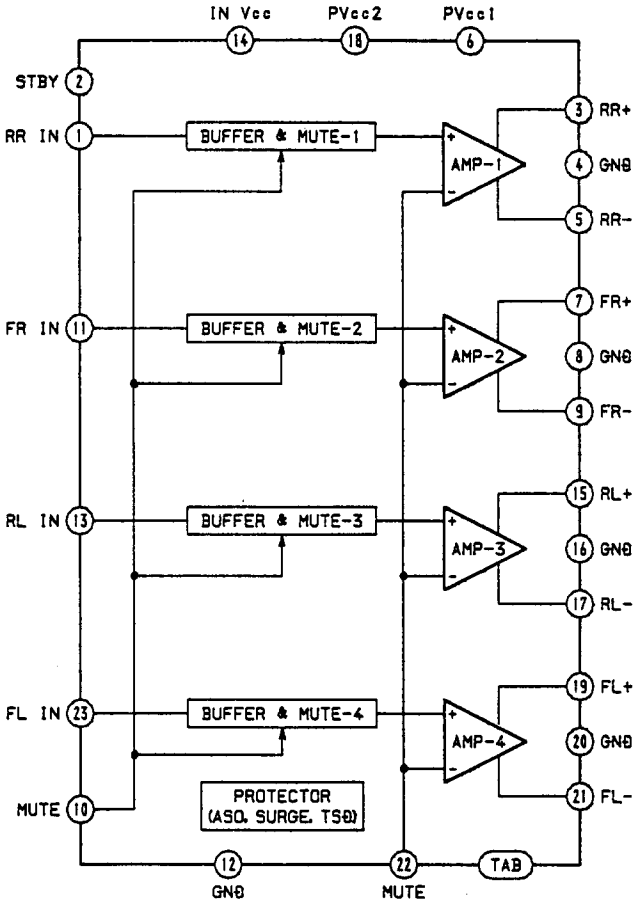
IC200 LA2113



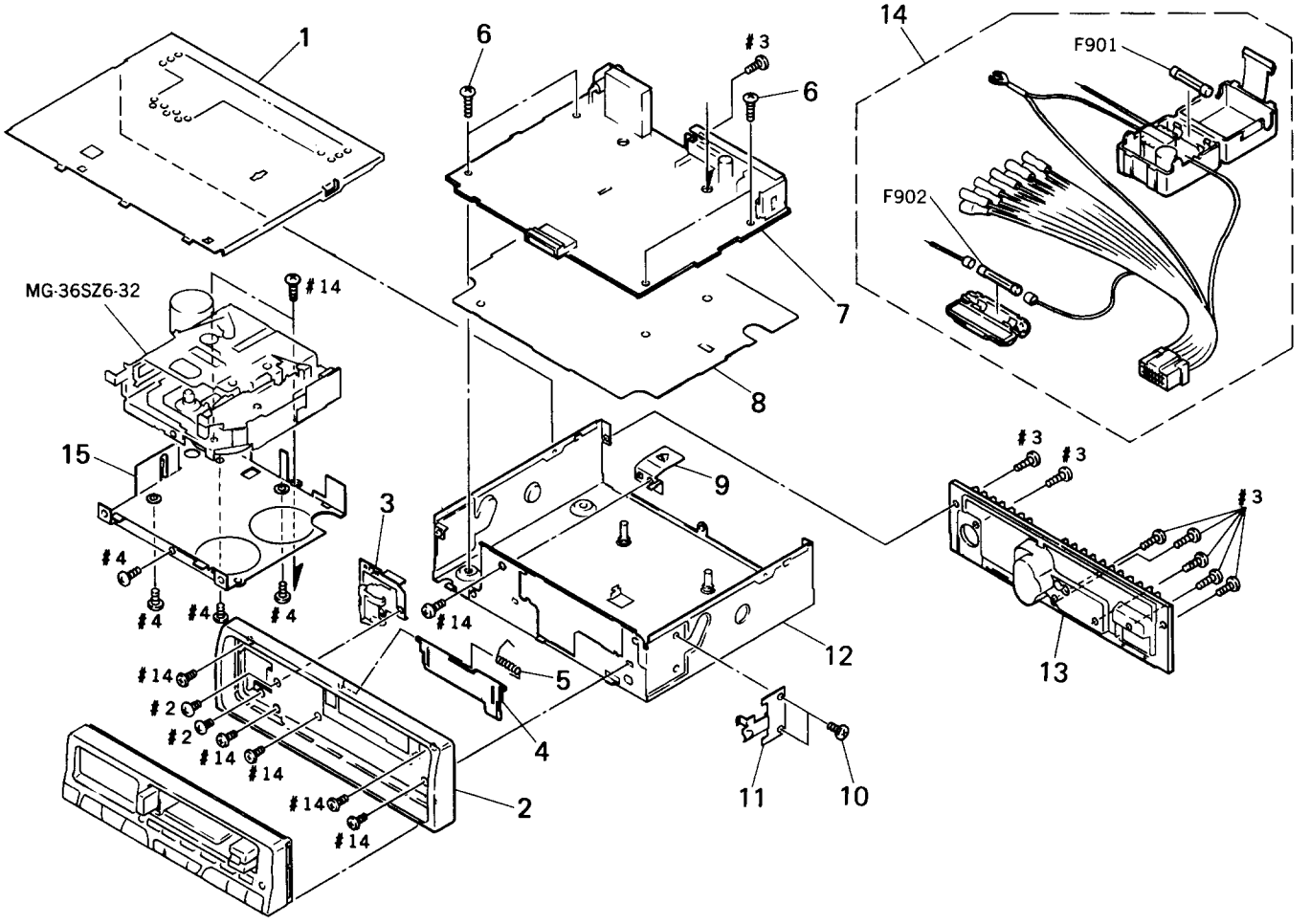
IC250 LA1875M



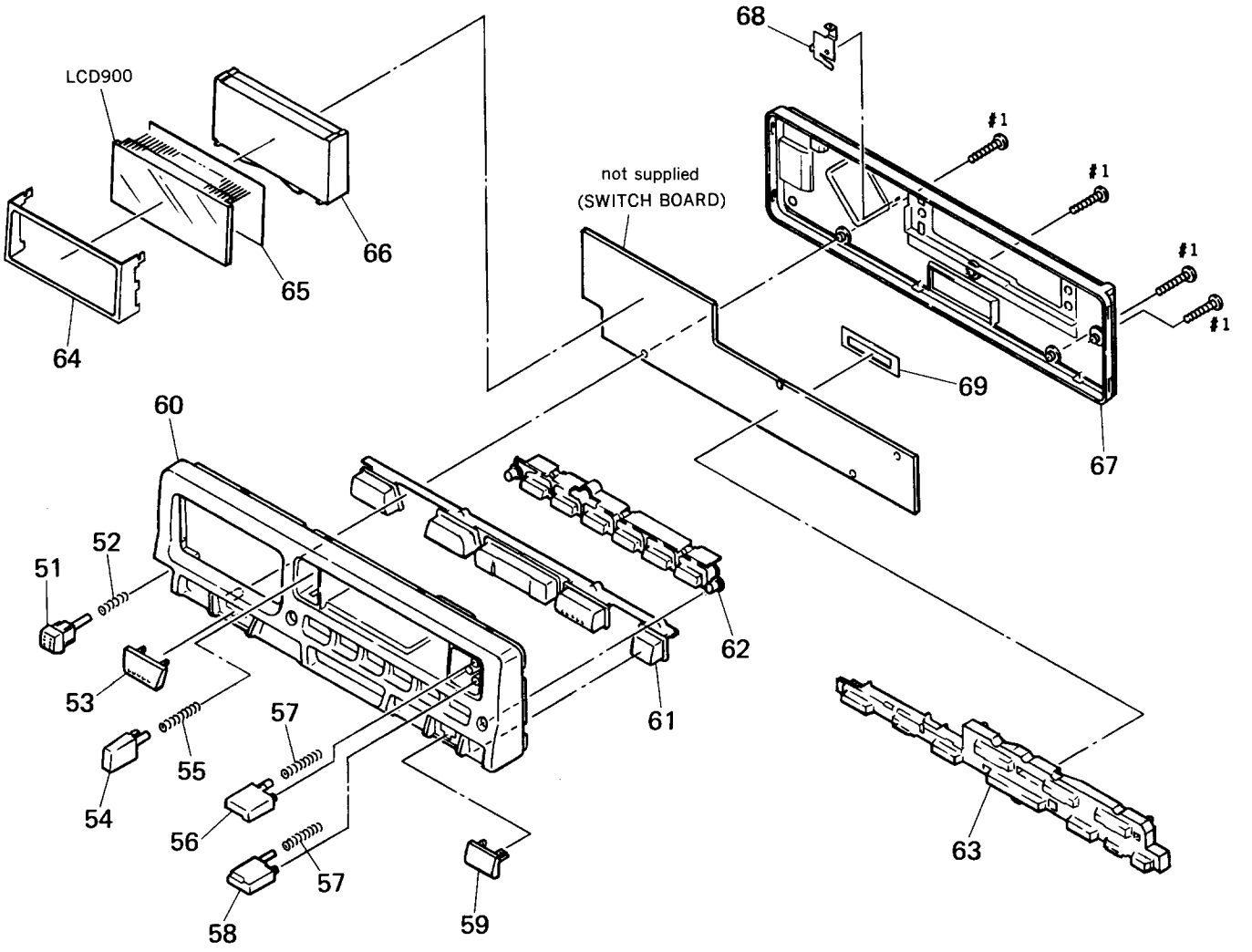
IC500 HA13151A



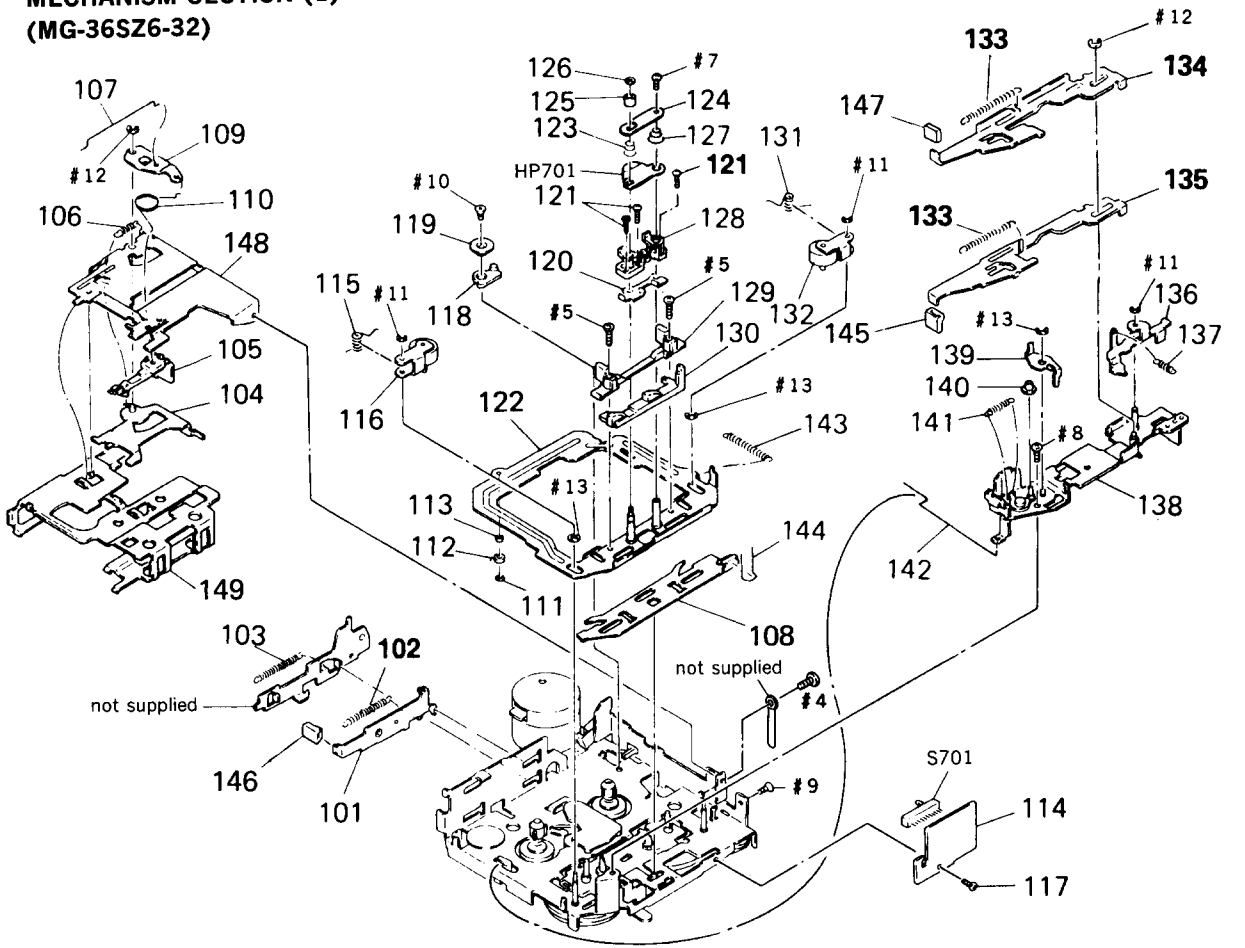
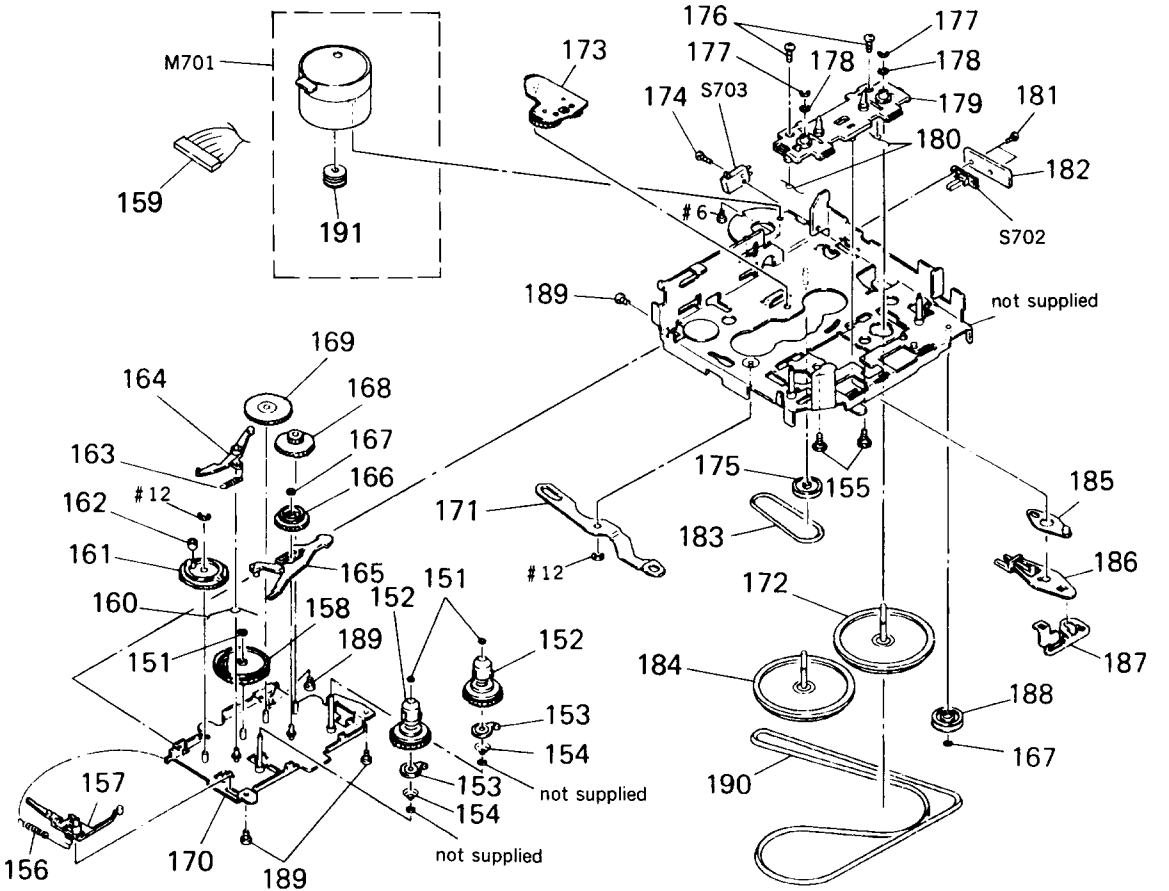
6-1. CHASSIS SECTION



6-2. FRONT PANEL SECTION



6-3. MECHANISM SECTION (1) (MG-36SZ6-32)



6-4. MECHANISM SECTION (2)
(MG-36SZ6-32)